

23 MAR 1971

MEMORANDUM FOR THE RECORD

SUBJECT: Data on Industrial Waste Treatment Facilities

STATINTL

1. On 17 March [REDACTED] and I visited Mr. Norwood, Facilities Engineering Division, Office of the Chief of Engineers, Department of the Army, in search of general information on industrial waste treatment plants.

2. Mr. Norwood commented that, of their many projects, he knew of no specific project which involved recycling of the waste water as part of the process. He pointed out that normally such a recycling plant would be designed and built as part of the basic industrial facility itself, rather than being handled separately as we do most sewage treatment plants and water treatment plants.

3. He provided the following data from the Army's file of proposed industrial waste treatment plants that are now included in their plans for upgrading various Army facilities. Those listed generally involve ammunition manufacturing plants which have a wide variety of acidic wastes to process.

a. Volunteer Army Ammunition Plant. A 70 million gallon per day treatment facility is planned at an estimated gross cost of \$5.9 million.

b. Radford Army Ammunition Plant. Improvements are planned at an estimated cost of \$24 million for wastes considerably in excess of $4\frac{1}{2}$ million gallons per day. (The volume treated may be considerably higher as the data listed was not clear on this point.)

c. The Joliet Ammunition Plant. An industrial waste treatment plant handling $\frac{1}{2}$ million gallons per day is planned at an estimated cost of \$524,000. (About \$1 per gallon per day.) At Joliet, another treatment plant costing slightly under \$200,000 is planned for handling "unsophisticated wastes" from laundrys and motor pools.

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d. Iowa Army Ammunition Plant. A treatment facility costing about \$300,000 is planned for handling TNT wastes. Total improvements costing about \$1.2 million are programmed for treatment of the variety of wastes from the entire base. (No volume was indicated.)

e. Fort Wainwright, Alaska. A 50 thousand gallon per day facility costing about \$1 million is planned to handle the wastes--flyash and limeslurry--which are generated by the local powerplant.

f. Edgewood Arsenal, Maryland. A facility costing about \$426,000 is programmed to treat the waste wash water from the base water treatment plant.

g. Fort Meade, Maryland. A facility is programmed to treat the waste wash water from the water treatment plant at a cost of \$257,000.

4. Mr. Norwood estimated that a sewage treatment plant to serve 6000 people would cost in the range of \$600,000 to \$1,000,000 and would require an area of about five acres. He said a rough criterion for these plants is \$1 per gallon of capacity. He was assuming a required capacity of about 100 gallons per day per person.

5. This data gives a range of costs for the specific types of plants involved and the specific wastes produced. More detailed information on the specific wastes, concentrations, etc. is available in the Army files. They had no projects planned to serve photographic facilities.

STATINTL

6. On 22 March [REDACTED] visited Mr. Lemmo, Naval Facilities Engineering Command, relative to information on costs for industrial waste treatment, recycling facilities. Mr. Lemmo indicated that the Navy is involved in recycling plants particularly in their civil works program. He provided the following information relative to the Rockwell Aviation Plant. The wastes that are treated and recycled are mostly from degreasing and paint shop activities. This plant processed 79 million gallons per month (2½ million gallons per day). The construction

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cost in 1963 of \$632,508 would equate to approximately \$900,000 for 1971. Mr. Lemmo stated that after processing, the water was purer than the local municipal water supply. Approximately 1 acre of land was required to house the treatment facilities.



STATINTL

Chief
Field Engineering Branch

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OL/RECD/FEngB, [REDACTED]:sl/3023
(22 March 1971)

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using a "pink sheet"
See copy of pink sheet
attached

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STATINTL

Data on Industrial Waste Facilities

**Chief, Field Engineering Branch,
RECD/OL**

905 Ames Center Building

3023

23 MAR 1971

**Chief, Building Planning
Staff, OL
1012 Ames Center Bldg.**

Data in the attached memo was developed pursuant to your request. Detailed information relative to any specific Agency facility will require the services of an A&E. We are available to assist your office in the selection and award of an A&E contract should this be desired in the future.